```
########################################
# Program:  needle
# Rundate:  Mon Sep 11 20:02:59 2006
# Align_format: srspair
# Report_file: /ebi/extserv/old-work/needle-20060911-20025882318727.output
########################################

#=======================================
#
# Aligned_sequences: 2
# 1: SEQ_179
# 2: G_kaustophilus_holB
# Matrix: EBLOSUM62
# Gap_penalty: 10.0
# Extend_penalty: 0.5
#
# Length: 987
# Identity:     754/987 (76.4%)
# Similarity:   754/987 (76.4%)
# Gaps:         230/987 (23.3%)
# Score: 4576.0
#
#
#=======================================


SEQ_179            1 atgcgatgggaacagctagcgaaacgccagccggtggtggcgaaaatgct     50
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu      1 atgcgatgggaacagctagcgaaacgccagccggtggtggcgaaaatgct     50

SEQ_179           51 gcaaagcggcttggaaaaagggcggatttctcatgcgtacttgtttgagg    100
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu     51 gcaaagcggcttggaaaaagggcggatttctcatgcgtacttgtttgagg    100

SEQ_179          101 ggcagcggggggacgggcaaaaaagcggccagtttgttgttggcgaaacgt    150
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu    101 ggcagcggggggacgggcaaaaaagcggccagtttgttgttggcgaaacgt    150

SEQ_179          151 ttgttttgtctgtccccaatcggagtttccccgtgtctagagtgccgcaa    200
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu    151 ttgttttgtctgtccccaatcggagtttccccgtgtctagagtgccgcaa    200

SEQ_179          201 ctgccggcgcatcgactccggcaaccaccctgacgtccgggtgatcggcc    250
                     |||||||||||||||||||||||||||||||||||||||||||||.|||
G_kaustophilu    201 ctgccggcgcatcgactccggcaaccaccctgacgtccgggtgatcagcc    250

SEQ_179          251 cagatggaggatcaatcaaaaaggaacaaatcgaatggctgcagcaagag    300
                     ||||.|||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu    251 cagacggaggatcaatcaaaaaggaacaaatcgaatggctgcagcaagag    300

SEQ_179          301 ttctcgaaaacagcggtcgagtcggataaaaaaatgtacatcgttgagca    350
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu    301 ttctcgaaaacagcggtcgagtcggataaaaaaatgtacatcgttgagca    350

SEQ_179          351 cgccgatcaaatgacgacaagcgctgccaacagccttctgaaatttttgg    400
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu    351 cgccgatcaaatgacgacaagcgctgccaacagccttctgaaatttttgg    400

SEQ_179          401 aagagccgcatccggggacggtggcggtattgctgactgagcaataccac    450
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu    401 aagagccgcatccggggacggtggcggtattgctgactgagcaataccac    450

SEQ_179          451 cgcctgctagggacgatcgtttcccgctgtcaagtgctttcgttccggcc    500
                     ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu    451 cgcctgctagggacgatcgtttcccgctgtcaagtgctttcgttccggcc    500
```

```
SEQ_179        501 gttgccgccggcagagctcgcccagggacttgtcgaggagcacgtgccgt   550
                   ||||||||||||||||||||||||| ||||||||||||||||||||||||||
G_kaustophilu  501 gttgccgccggcagagctcgctcagggacttgtcgaggagcacgtgccgt   550

SEQ_179        551 tgccgttggcgctgttggctgcccatttgacaaacagcttcgaggaagca   600
                   ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu  551 tgccgttggcgctgttggctgcccatttgacaaacagcttcgaggaagca   600

SEQ_179        601 ctggcgcttgccaaagatagttggtttgccgaggcgcgaacattagtgct   650
                   ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu  601 ctggcgcttgccaaagatagttggtttgccgaggcgcgaacattagtgct   650

SEQ_179        651 acaatggtatgagatgctgggcaagccggagctgcagcttttgttttttca   700
                   ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu  651 acaatggtatgagatgctgggcaagccggagctgcagcttttgttttttca   700

SEQ_179        701 tccacgaccgcttgtttccgcattttttggaaagccatcagcttgacctt   750
                   ||||||||||||||||||||||||||||||||||||||||||||||||||
G_kaustophilu  701 tccacgaccgcttgtttccgcattttttggaaagccatcagcttgacctt   750

SEQ_179        751 ggacttg                                              757
                   |||||||
G_kaustophilu  751 ggacttgatttgctttatatttataccgcgatttgttgcatattcaagc   800

SEQ_179        758                                                      757

G_kaustophilu  801 cgggcagatggacggcgtgttataccgcgatcagctggaccgcctgcaac   850

SEQ_179        758                                                      757

G_kaustophilu  851 gatgggcgcttgcttgcccgcagcggcggattttggctggcatggaagcg   900

SEQ_179        758                                                      757

G_kaustophilu  901 attttacaagcgaaaacgcgtttaaatacaacgaatatgagcacggcgtt   950

SEQ_179        758                                                757

G_kaustophilu  951 gcttgttgagcagctcgttcttcaattaaagcggtaa          987
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